Designer Tells Secret in Rare Interview

BY RALPH DIGHTON

Burbank, Cal., Dec. 21 (AP)—Every time the communists shoot down an "angel," Clarence L. Johnson winces.

"Angel" is the nickname of the U-2 plane, the glider-wing jet sky spy. Johnson designed it.

That's one reason Johnson winces. The other is the certainty that soon he will be besieged with questions he must not answer about one of the world's most secret aircraft.

Keeps Mouth Shut

Johnson hates to answer questions. "I learned a long time ago, you can't put your foot in your mouth if you keep your mouth shut," he says.

Four times the Communists have shot down U-2s — once over Russia, once near Cuba, twice over China.

After the first U-2 incident on May 1, 1960, Johnson established a policy: he retreated into his "skunk works" — a hush-hush section of Lockheed Aircraft corporation which he heads as vice president of advanced research — and simply never was available.

For three years he remained aloof, improving the U-2 and, rumor has it, adapting its photographic cargo for use in Lockheed-built Agena satellites, which the air force uses as Samos space spies.

Accepts Air Award

Recently Johnson stepped back into the limelight long enough to accept an Air Force association trophy for "providing the free world with one of its most valuable instruments in defense of freedom," the U-2.

Before returning to the privacy of his "skunk works," Johnson granted a rare and exclusive interview. From this emerged a portrait of an unassuming genius who four times has come up with radical military aircraft designs the nation urgently needed: the P-38 of World War II, the jet-powered F-80, the almost wingless F-104, and the U-2.

Before the U-2, jet engines were used for speed. Johnson adapted the jet for propulsion in high, thin air where propellers are useless and combined it with the long, tapered wings of a glider for maximum lift.

Built in 8 Months

"We built the U-2 in eight months after Trevor Gardner [chief of air force research in the Eisenhower administration] gave us the go-ahead," Johnson said.

"There are many secrets in its design. Many have tried to copy it, both in this country and elsewhere, but none has succeeded.

"I'll tell you one of the secrets: in flight, the 80-foot wing bends upward, which means we can let gravity force fuel down to the engines and eliminate the weight of some pumps."

Johnson says lessons learned from the U-2 have helped in the development of pressure suits and oxygen systems for astronauts.

Johnson also had a hand in cracking the sound barrier, a problem the entire industry worked on for years. He was the first to modify wing flaps into dive brakes for control at near-sonic speeds.

Designs Too Advanced

Two of Johnson's designs, both dating from the 1940s, were so advanced he couldn't sell them then.

One, his L-193, designed in 1949, was dropped because air lines termed it "too radical for public acceptance." On paper it looks remarkably like today's latest swept-wing transports with aft-mounted engines. "I have several letters of apology from air lines people in my files," says Johnson.

Here Is U-2's Father

Clarence L. Johnson, father of the U-2 "sky spy" plane, stands in front of his baby. (AP Photo)